

# Waste Management Definitions

Los Alamos National Laboratory

Laboratory Implementation Requirements LIR404-00-04.0

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## Waste Management Definitions

**NOTE:** Unless the term is immediately followed by a regulatory or DOE citation, the term is a Laboratory adaptation to clearly define the unique meaning and significance of the term at the Laboratory. Where “Solid” is capitalized the word is used as intended in RCRA, where “solid” is not capitalized, it refers to the physical state of the waste.

**<90-day accumulation area** {40 CFR 262.34}: A designated space for accumulating hazardous or mixed waste in containers or tanks; the waste may not remain in the accumulation area longer than 90 days.

**acceptable knowledge (AK):** A wastestream characterization method that can be used to meet all or part of the waste analysis requirements appropriate for the waste media. The method may include documented process knowledge, supplemental waste analysis data, and/or facility records of analysis.

**accumulation start date :** The date on which each period of accumulation of waste in a container or tank begins.

**acute hazardous waste:** Discarded commercial chemical products, manufacturing chemical intermediates, off-specification commercial chemical products or technical grades of the chemical that are identified in 40 CFR 261.33 (e) as acute hazardous waste or hazardous wastes with a hazard code of “H.”

**administratively controlled waste:** Waste that is nonhazardous and nonradioactive that may not be disposed of at a commercial or municipal solid waste landfill. This includes, but is not limited to, classified waste, sensitive waste, certain New Mexico Special Wastes, and empty containers greater than 30 gallons.

**asbestos waste:** Waste that contains more than 1% of any of the following naturally occurring crystalline minerals: chrysotile, amosite, crocidolite, tremolite, actinolite, and anthrophyllite; may be friable or nonfriable.

**biological waste:** See “noninfectious biological waste.”

**compactible waste:** Materials that are capable of undergoing volume reduction, such as paper, plastic, and glass.

**contact-handled radioactive waste** {DOE Order 5820.2A}: Packaged waste with an external surface dose rate not exceeding 200 mrem/hr.

**decommissioning:** The permanent removal from service of surface facilities or equipment.

**decontamination:** The removal of unwanted material ( e.g., radioactive material) from personnel, equipment, or areas.

**disposal:** The discharge, deposit, injection, dumping, spilling, leaking, or placing of any waste into or on any land or water so that such waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

**EPA hazardous waste number** {40 CFR 260.10}: As defined by regulations promulgated under the RCRA and New Mexico HWA, the number assigned by the Environmental Protection Agency (EPA) to each type of hazardous waste listed in 40 CFR 261, Subparts C and D.

**environmental restoration:** A term used by the DOE to describe cleanup of DOE facilities and lands.

**hazardous waste** {40 CFR 261.3}: A Solid waste that is not excluded from regulation as a hazardous waste, and is a listed hazardous waste, or exhibits any of the hazardous characteristics, ignitibility, corrosivity, reactivity, or toxicity

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**high explosive (HE) waste:** Any waste containing material having an amount of stored chemical energy that starts a violent reaction when initiated by impact, spark, or heat. This violent reaction is accompanied by a strong shock wave and the potential for propelling high-velocity particles.

**high-level waste (HLW) {DOE Order 5820.2A}:** The highly radioactive waste material such that results from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid waste derived from that liquid, that contains a combination of transuranic waste and fission products in concentrations requiring permanent isolation.

**infectious waste {20 NMAC 9.1.105AL}:** This term refers to a limited class of waste materials that carry a probable risk of transmitting disease to humans including, but not limited to, the following: regulated medical waste, infectious substances (etiologic agents), other potentially infectious materials (OPIM), and regulated waste.

**knowledge of process:** See “acceptable knowledge.”

**low-level radioactive waste (LLW) {DOE Order 5820.2A}:** Waste that contains radioactivity and is not classified as high-level waste, transuranic waste, or spent nuclear fuel or II(e)2 byproducts material (e.g., uranium or thorium mill tailings) as defined in Department of Energy Order 5820.2A, “Radioactive Waste Management.” Test specimens of fissionable material irradiated for research and development only and not for the production of power or plutonium may be classified as low-level waste, provided that the concentration of transuranics is less than 100 nCi/g of waste.

**medical waste:** See “regulated medical waste.”

**mixed waste (MW){derived from RCRA, 42 U.S.C.A. 6903(41)}:** Any waste containing both hazardous waste and source, special nuclear, or by-product materials subject to the Atomic Energy Act of 1954..

**New Mexico Special Waste {20 NMAC 9.1.105BZ}:** The following types of Solid waste have unique handling, transportation, or disposal requirements to assure protection of the environment, public health, welfare, and safety: (treated formerly characteristic hazardous waste) ; packing house and killing plant offal; asbestos waste; ash; infectious waste; sludge, except compost that meets the provisions of 40 CFR 503; industrial Solid waste; spill of a chemical substance or commercial product; dry chemicals, which when wetted, become characteristically hazardous; and petroleum-contaminated soils.

**noncompactible waste:** Materials not capable of being compacted or undergoing volume reduction, such as solid metal materials with minimum void space and metal bricks.

**nonhazardous waste:** Any waste that is not regulated as a hazardous waste by RCRA/HWA but that may present a threat to human health or the environment and require special administrative controls.

**noninfectious biological waste:** A biological waste that cannot be classified as an infectious substance or a regulated medical waste and is not subject to federal or state regulations on infectious waste.

**normal waste:** Waste produced from (1) any type of production operation, analytical and/or research and development laboratory operations; (2) treatment, storage, and disposal operations, “work for others,” or (3) any other periodic and recurring work that is considered ongoing in nature. Such wastes arise from activities that occur regularly and that generate a waste stream of a predictable quantity and characterization and are not part of the Laboratory’s environmental restoration activities.

**off-normal waste:** Waste that is generated or occurs on an unscheduled basis or is of unpredictable quantity and/or characteristics. Because of its unpredictable nature, this waste cannot be trended over an extended period of time.

**orphaned waste:** Any material or waste with an unknown origin, or generator.

**other potentially infectious materials (OPIM) {29 CFR 1910.1030(b)}:**

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- (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva (in dental procedures), any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; or other potentially infectious material that may result from the performance of the employee's duties,
- (2) Any unfixed tissue or organ (other than intact skin) from a human, either living or dead; and
- (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

**polychlorinated biphenyl (PCB) waste:** A waste containing the biphenyl molecule that has been chlorinated. PCB waste is regulated if the concentration of PCBs in the source material is greater than or equal to 50 ppm.

**Radioactive Liquid Waste Collection System (RLWCS):** Network of underground pipelines and associated equipment that carry radioactive liquid waste from Laboratory sites to the Radioactive Liquid Waste Treatment Facilities (RLWTF). The RLWCS was formerly referred to as the Acid or Industrial Waste Line.

**Radioactive Liquid Waste Treatment Facilities (RLWTF):** The radioactive liquid waste treatment plants managed and operated by the EM-RLW: the Main Plant at TA-50-1; the Pretreatment Plant in Room 60 and 60A at TA-50-1; and the pretreatment plant at TA-21-257 (DP-257).

**radioactive waste:** Waste that has been determined to contain added (or concentrated Naturally Occurring Radioactive Material [NORM]) radioactive material or activation products by either monitoring and analysis, acceptable knowledge, or both; or DOES NOT meet radiological release criteria.

**recycled** {40 CFR 261.2}: A material that is used, reused, or reclaimed. A material is reclaimed if it is processed to recover usable products, or if it is regenerated. A material is used or reused if it is either employed as an ingredient in an industrial process to make a product or employed in a particular function or application as an effective substitute for a commercial product.

**regulated medical waste** {49 CFR 173.134(a)(4)}: A waste or reusable material, other than a culture or stock of an infectious substance, that contains an infectious substance and is generated in (1) the diagnosis, treatment or immunization of human beings or animals; (2) research pertaining to the diagnosis, treatment or immunization of human beings or animals; or (3) the production or testing of biological products (refer to 49 CFR 173.134).

**regulated waste** {29 CFR 1910.1030(b)}: A liquid or semiliquid blood or other potentially infectious materials (OPIM); contaminated items that would release blood or OPIM in a liquid or semiliquid state if compressed; items that are caked with dried blood or OPIM and are capable of releasing these materials during handling; contaminated sharps; and pathological microbiological wastes containing blood or OPIM.

**remote-handled (RH) radioactive waste** {DOE Order 5820.2A}: Packaged waste with an external surface radiation dose rate exceeding 200 mrem/hr.

**satellite accumulation area** {40 CFR 262.34}: A designated space for accumulating hazardous and mixed waste where the volume of hazardous waste may not exceed 55 gallons or the volume of acutely hazardous waste may not exceed one quart. The accumulation area must be located at or near the point of generation and be under the control of the generator/operator of the process generating the waste.

**segregate:** To separate waste from nonwaste materials and sort waste according to type, such as radioactive and nonradioactive, hazardous and nonhazardous, etc.

**Solid waste** {40 CFR 261.2}: As defined by regulation promulgated under the Resource Conservation and Recovery Act (RCRA) and the New Mexico Hazardous Waste Act unless otherwise excluded, any discarded material, either abandoned,

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recycled, or inherently waste-like, including liquids, solids, semisolids, and contained gases. Solid waste can be simply Solid or special, hazardous, nonhazardous, radioactive (including transuranic), or mixed waste. Waste consisting solely of source, special nuclear, or byproduct material, as defined by the Atomic Energy Act, is exempt from the Solid waste regulations as defined by RCRA. Environmental media (e.g., soil or water) is not Solid waste unless it is destined for disposal. For the more extensive definition under regulation promulgated under the New Mexico Solid Waste Act refer to 20 NMAC 9.1.105BV.

**storage:** The holding of waste for a temporary period, at the end of which the waste is to be treated, disposed of, or stored elsewhere.

**suspect radioactive waste:** Waste that is generated in an area where radioactive materials are present but that cannot be practically verified as being nonradioactive.

**transuranic (TRU) waste** {DOE 5820.2A}: Without regard to source or form, waste that is contaminated with alpha-emitting radionuclides with half-lives greater than 20 years and concentrations greater than 100 nCi/g at the time of assay and that have atomic numbers greater than 92.

**newly generated TRU waste:** Waste generated after the development, approval, and implementation of a transuranic (TRU) waste characterization program that meets the requirements outlined in the Transuranic Waste Characterization Quality Assurance Program Plan. Newly generated TRU waste also includes any previously generated waste (retrievable stored waste) that undergoes any form of treatment, processing, or repackaging in accordance with the LANL Quality Assurance Project Plan.

**retrievable TRU waste:** Waste that is not classified by the Department of Energy as permanently buried and that has been generated before the development and implementation of a transuranic (TRU) waste characterization program that meets the requirements outlined in the Transuranic Waste Characterization Quality Assurance Program Plan and that has been identified by the Department of Energy as candidate waste for retrieval.

**treatment:** When applied to hazardous waste or hazardous components of mixed waste, any method, technique, or process, including neutralization, designed to change the physical, chemical, radiological, or biological character or composition of any waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous, or less hazardous; safe to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

**universal waste** {40 CFR 273}: Certain of the following types of hazardous waste are subject to the universal waste requirements of 40 CFR 273: batteries, pesticides, and mercury thermostats. The universal waste requirements ease some of the regulatory requirements for collecting and managing these common waste types

**unknown waste:** See “orphaned waste.”

**waste acceptance criteria (WAC):** Criteria placed on waste form, container, radioactivity, packaging, labeling, etc., that must be met before waste is accepted for treatment, storage, or disposal.

**waste certification program:** A systematic, documented approach, used by a waste generator organization to ensure that waste is managed in a manner that provides reasonable assurance that the treatment, storage, and disposal facilities' waste acceptance criteria are met.

**waste characterization:** The determination of a waste's physical, radiological, and chemical characteristics with sufficient accuracy to permit proper classification and management.

**waste generator:** Any individual and his/her line management (e.g., a research scientist or project manager) having direct responsibility for operations that generate waste. A waste generator may be a member of the organization responsible for the facility/site where the waste was generated. Waste generators have the responsibility for proper characterization, storage, and disposal of the waste they generate.

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**waste management:** The planning, coordination, and direction of those functions related to generation, handling, treatment, storage, transportation, and disposal of waste, as well as associated surveillance and maintenance activities.

**Waste Management Coordinator (WMC):** The individual responsible for coordinating waste management activities on behalf of waste generators, line managers, Facility Managers, Field Project Leaders, the Waste Management groups, and other Laboratory organizations. This individual also coordinates resolution of waste management issues on behalf of his/her waste-generating organization and reviews documents pertaining to the management of waste.

**waste stream:** A waste or group of wastes from one or more processes or facilities with similar physical, chemical, and/or radiological characteristics.